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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,633	11/19/2001	Robert G. Moores JR.	0275D-214COA	1062

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EXAMINER

KALAFUT, STEPHEN J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 05/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,633

Applicant(s)

MOORES ET AL.

Examiner

Stephen J. Kalafut

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 27-30 and 33-35 is/are rejected.
- 7) ☒ Claim(s) 31 and 32 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

Art Unit: 1745

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 27, 28, 30 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Mita (US 5,456,994).

Mita discloses a battery pack (1) comprising a housing (2) containing an array of cells (31) and a vent system including a chamber (8) through which a fluid would flow, as best seen in figure 2. The pack also includes heat-dissipating fluid directors (35) between cells, and a fan (5) for moving the fluid through the vent system, thus helping to dissipate heat. The term “removable” would not distinguish, since any battery pack can be moved, if it is lifted by a strong enough person or machine.

Claims 27-29 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Ogami *et al.* (US 5,866,276).

Ogami *et al.* disclose a battery pack for a vehicle, which is attached to the vehicle by four brackets (19), and is thus removable. The pack includes a housing (7) which contains a group of cells (1), a vent system including holes (11, 12), and a set of fluid directors (15) which would

Art Unit: 1745

dissipate heat. See figures 1 and 5. The pack also includes rib walls (5) which contact the cells, and thus serve as a heat sink.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 30, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogami *et al.* in view of Mita, both above.

These claims differ from Ogami *et al.* by reciting a fan for moving air through the battery pack. The air which is used to cool the battery pack of Ogami *et al.* would be provided by the motion of the vehicle relative to the surrounding atmosphere. This would not provide airflow, however, when the vehicle is stopped while still being used. Mita discloses a battery cooling device which uses a fan to propel the air past batteries in order to cool them. Since a fan would be useful even when the vehicle is stopped, it would be obvious to use a fan as shown by Mita with the battery pack of Ogami *et al.*

Claims 31 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art applied above or cited below does not disclose either a heat pump, or a temperature sensor and a temperature-equalizing heat dissipater, within a battery pack as presently claimed, or render obvious the addition of these features.

Art Unit: 1745

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Saunders (US 2,104,772), Alisauki (US 5,204,609) and Peled *et al.* (US 5,447,807) disclose batteries which are cooled by fans. Dougherty *et al.* (US 4,107,402) disclose a battery with internal airflow passages. Terazoe *et al.* (US 6,049,191) disclose a battery charging system with a cooling fan. Hyodo *et al.* (US 6,066,938) disclose a battery charging system for use with a power tool.

The disclosure is objected to because of the following informalities: Drawing numerals 82 (figure 4a) and 147 (figure 8) are not found in the specification. Numerals 56 (page 9, line 24), 78 (page 10, line 12), 83 (page 10, line 23), and 200 (page 15, line 7) are not found in the drawings. On page 10, line 3, the text refers to "battery cells 36", but in corresponding figure 3, the cells are numbered as 66. Appropriate correction is required.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is (703) 308-0433. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Art Unit: 1745

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

sjk
May 13, 2003


STEPHEN KALAFATIS
PRIMARY EXAMINER
GROUP 1 201